

REPLACEMENT SHEET

18

ABSTRACT OF THE DISCLOSURE

A database network router (DNR) in a database network includes a client access module and a database resource manager that communicate with each other using a common software interface. The client access module communicates with clients including application servers and external database servers; and the database resource manager communicates with the database servers. The DNR also includes a protocol manager for handling multiple database protocols. The database network router also includes local data cache storage to store commonly used data objects, results of parsed query statements, non-optimized query statements, and optimized alternatives for non-optimized query statements. The database network router identifies and assigns a priority to each client on log-in. The DNR provides a method for connections pooling, a method for balancing the load in a database network and a method for synchronizing the data stored in cache memory with the database to insure data reliability. The DNR also provides a method for monitoring and optimizing data queries to improve the performance of the database network. The DNR also provides a method to migrate from an old to a new version of a database.